STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

4241 State Office Building • Salt Lake City, UT 84114 • 801-533-5771

Scott M. Matheson, Governor
Temple A. Reynolds, Executive Director
Dianne R. Nielson, Ph.D., Division Director

June 25, 1984

Mr. LeRoy Fyock
Chevron Phosphate
Mannila Star Route
Vernal, Utah 84078

RE: Permitting
Amercian Gilsonite Company
Bonanza Operations
ACT/047/010
Uintah County, Utah

Dear Mr. Fyock:

The Division has completed its technical review of the Mining and Reclamation Plan (MRP) received December 12, 1983, for American Gilsonite Company's Bonanza Operations. This review has identified additional deficiencies, which need to be adequately addressed in order to complete the permitting process. The review/deficiency document is attached to this letter.

Please oganize your response in terms of the regulations as cited in the review (i.e., Rule M-3(1)(e), etc.). It would also be helpful if changes or clarifications could be fit directly into the 3-ring binder holding the MRP. If you have questions about the review or would like to set up a meeting with the review team, feel free to contact me.

Sincerely,

Susan C. Linner

Susan C. Linner
Permit Supervisor

SCL:grc
93710

cc: Jim Smith, DOGM
Tom Tetting, DOGM
Tom Portle, DOGM

Enclosure

MRP REVIEW

American Gilsonite Company
Bonanza Operations
ACT/047/010
Uintah County, Utah

Rule M-3(1)(e)-TJS

For each surface disturbance show:
- Direction of runoff conveyance
- Diversion locations
- Diversion design
- Capability of natural drainages to handle discharge waters.

Rule M-3(1)(g)-TJS

For each detention pond for water discharge show:
- The detention time for water to be released
- That pond designs meet the requirements of State Health
- That BLM has approved a special use permit for the pond at Eureka 15 site

Rule M-3(1)(h)-TJS

For each discharge point describe:
- Salt or acid content of water discharged
- Expected impact on down stream waters

FORM MR-1

Rule M-3(2)-TNT

p. 6, 21(d) The Division has noted upon inspection that a certain amount of waste rock is occasionally extracted from mine sites during initial shaft construction. The type of rock involved, its placement as fill and any distinguishing characteristics, as referenced under this section should be discussed. While this is mentioned on p. 7, 21(e) and referenced to map II, no open cut site could be found, nor were the details explaining the overburden material sufficient.

Rule M-3(2)(c)(2)-SCL

Any plans the applicant selects as an alternative to the current practice of storing ore in surface bunkers must be submitted to the Division for review and approval at least 60 days prior to planned implementation.

Rule M-3(2)(d)-SS

Applicant should submit a narrative on how reclamation will proceed. Will reclamation of previous mined sites proceed in conjunction with on going mining?

Applicant will need a brief narrative on capping or plugging drill holes.

GRADING AND SOIL PREPARATION

Rule M-3(2)(d)-TLP

Concerns relative to this question have been addressed in the applicants December 1983 submission on page 8 of 12. This information should be expanded upon to include techniques, necessary equipment and criteria for ditches, berms and contour furrows.

The operator has not specified the season of year in which soil will be re-applied or treated. Acknowledgement of seasonal limitations to redistribution due to moisture content should be added to the application.

Criteria relative to soil amendments to be provided should be discussed.

Rule M-3(2)(e)(f)-SCL

The applicant does not at this time have a complete final reclamation plan for the mine site area, due to the fact that testplots have been implemented to determine the most beneficial reclamation procedures. Therefore, the applicant will be required to submit complete reclamation plans (as described under this section in the May 3, 1983 deficiency letter) for the Division's review and approval at least 60 days prior to implementation of any reclamation activities. It would be most efficient to have a submittal containing plans for all reclamation activities proposed for a given year early in that year (prior to spring reclamation work).

The reclamation schedule (page 49) needs to be revised to indicate which areas were actually reclaimed this spring. Test plots at the mine site facilities area and ore storage ponds should be included in the table.

Rule M-5

Surety Gurantee-SS

Applicant should submit a brief narrative of each individual reclamation mine site (i.e., shafts, buildings to be dismantled, acreage of topsoil spreading, in yd^3 quantities). Applicant must also add a 15% contingency for contractors overhead and profit to the final bond amount.

The estimate for seed on the road calculation indicates $750 per acre. Please revise to $120 per acre.

Applicant should submit exact model number of reclamation equipment used (ex. 1406 motorgrader) for estimation purposes.

STIPULATION M-5-TLP

In light of the operator's commitment relative to using results from test areas (page 10a) to clarify future reclamation techniques; should the results indicate a departure from the dollar amounts cited for bonding the bond shall be adjusted accordingly.

Form MR-1

Rule M-10(10)-TNT

p.7, 22(a) A diagram of the concrete slab should accompany the narrative given on page 7a. It should include the method for affixing the slab to the earth so that it cannot be simply shoved aside by a bulldozer or other mechanized equipment. Design details are requested.

Rule M-10(12)-SCL

It is not clear from the mine site inventory forms where the surrounding cover value for each site came from. Therefore, the transect number (or numbers) used to determine the cover should be referenced on each form. If the cover value does not agree exactly with the transect, an explanation should be provided. The vegetation type of each minesite should also be listed on the forms.

The applicant states that test plots "will be observed in future years to determine the best practices" for reclamation (page 10a). A commitment to submit test plot results to the Division in a yearly report is necessary. Any reclamation plan changes should be based on these reports.

The applicant has committed to monitoring reclaimed areas on a yearly basis. Monitoring should be done using the same methods as the vegetation inventory (line transect) and at the same time of year (June) as the pre-reclamation vegetation inventory.

Rule M-10(14)-TLP

TOPSOIL REMOVAL

The Operator has provided a soil suitability chart on page 6D. The SAR figure should be amended to read less than rather than greater than. The textures should be broken out under the suitability columns rather than simply listed.

The operator has failed to utilize the topsoil tabulation chart to account for topsoil/substitute soil volumes as requested in the May 3, 1983 review letter. When the operator does fulfill this requirement please address the following items:

1. Since much topsoil has been incorporated in MSHA road berms (cross section page 5D) this volume of material shall be considered.

2. In areas where the pad was sampled for "substitute material" the depths to which sampling was done should be considered when arriving at a volume. Data sheets in Appendix 1 do not contain depth figures and volumes. Volumes are stated for Harrison 10, Independent 15 and Little Emma 6. How were these figures generated?

3. The operator was questioned regarding potential for borrow areas in the last submission in the context of topsoil/substitute material deficits. Recently (April 27, 1984) the need for a borrow area (For fire control at the landfill site) was discussed. Please respond to the borrow area in each of the above contexts and in light of the overall soil balance.

SOIL STORAGE

The operator has not addressed the protection of topsoil which is currently stored in berms. Please include the specific seed mix to be used in topsoil stockpile/berm protection.

SOIL REDISTRIBUTION AND AMENDMENTS

The operator has not discussed how soils data will be used to make fertilizer recommendations. Extensive soils data has been provided and is inclusive at abandoned sites to be reclaimed such as: Eureka 21, Little Emma 3 and 43, Pride of the West 3 and 4 and Wagonhound 11. Data is available for the facilities area and the storage pond area.

MINESITES

1. No statements regarding preparation of the seedbed (such as ripping or chiseling) is made.

2. No fertilizer is cited as being slated for application.

STORAGE POND

1. As noted above nothing on seedbed preparation has been provided.

2. Similarly nothing on fertilizer requirements is addressed.

FACILITY AREA

1. 30 lbs per acre potassium should be provided.

2. Why will mulch not be provided in any of the conditions to be studied here ?

Recommendations for treatments and amendments at minesites and test locations slated for reclamation are as follows:

Little Emma 3

Lbs/acre	Nutrient
40	N
30	P
30	K

Little Emma 4*

Lbs/acre	Nutrient
30	P

Pride of West 3 & 4

Lbs/acre	Nutrient
20	N
30	P
30	K

Wagonhound 11*

Lbs/acre	Nutrient
10	N
20	P
15	K

Eureka 21
No site specific data coupled with variability in data from other Eureka sites makes it impossible to make a recommendation.

* No data from specific minesite: recommendation, inferred from similar site.

** All treatment such as ripping, chiseling, scarification fertilization and mulch should be utilized and/or tested at the various reclamation test locations.

GENERAL COMMENTS

Why are the Organic Carbon contents so high for the minesites?

Why are the SAR and Na contents elevated on minesites and topsoil stockpiles versus the adjacent undisturbed areas? Please provide an analysis for the chemical composition of gilsonite.

The cost of fertilizer and mulch is not found in the bond calculations.

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